

REMARKS

Claims 1-3, 5-13, 15-18, 20-23, 25-45 are all the claims pending in the application.

By this Amendment, the subject matter of claim 4 has been added to claim 1, the subject matter of claim 14 has been added to claim 12, the subject matter of claim 19 has been added to claim 17 and the subject matter of claim 24 has been added to claim 22. Claims 4, 14, 19 and 24 are canceled without prejudice or disclaimer.

Applicant submits that claims 34-35 comply with 35 U.S.C. § 101.

Claims 1, 3-4, 6-7, 9-10, 12-14, 17-19, 22-24, 26-27, 29-30, and 32-45 are rejected under 35 U.S.C. § 102(e) as being anticipated by Tajime (U.S. Patent No. 6,915,018; hereinafter “Tajime”). Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Tajime in view of Kim (U.S. Patent Publication No. 2002/0126752; hereinafter “Kim”). Claims 5, 8, 11, 15, 16, 20, 21, 25, 28, 31 are objected to as being upon a rejected base claim but would be allowable if rewritten in independent form.

Applicant respectfully submits that claim 1 is believed to be patentable because Tajime fails to disclose or suggest, inter alia, an apparatus wherein:

the complexity estimation unit calculates complexity of a picture to be currently encoded, using complexity of decoded previous and current pictures output from the video decoding unit and complexity of an encoded previous picture output from the video encoding unit.

Nowhere in the sections of Tajime cited by the Examiner (col. 1, lines 11-18, 45-67) is there any mention of using a complexity of decoded previous and current pictures output from

the video decoding unit and complexity of an encoded previous picture output from the video encoding unit, as recited in claim 1.

For at least the above reasons, claim 1 is believed to be patentable. Claims 3, 6, 7, 35, and 37, which depend from claim 1, are believed to be patentable for at least the reasons submitted for claim 1.

Furthermore, Applicant submits that claim 6 is believed to be patentable because Tajime fails to disclose or suggest a transcoding apparatus wherein the bit-allocation unit increases a number of bits to be allocated for the current picture if complexity of an estimated current picture is large, and decreases number of bits to be allocated for the current picture if the complexity of the estimated current picture is small, in combination with other elements of the claim. Although the sections of Tajime cited by the Examiner (col. 8, lines 19-38), disclose the calculation of certain intermediate values, e.g., the base quantizer step size in the picture group quantizer step size computing means 102 and the adjusted quantizer step size in the quantizer step size adjusting means 103, none of these intermediate values are supplied to the encoding path section 13 which encodes the information at a certain bit rate. To determine the bit rate of the encoded signal, the encoding path section 13 receives the input bitstream quantizer step size from the quantizer step size selector 104. In col. 8, lines 39-44, the quantizer step size selector 104 is described as supplying the input bitstream quantizer step size supplied from the decoding path section 11 if the quantizer step size supplied from the quantizer step size adjusting means 103 is smaller. Therefore, Tajime fails to disclose increasing a number of bits to be allocated for the current picture if complexity of an estimated current picture is large, as recited in claim 6.

Claim 37 is also believed to be patentable because Tajime fails to disclose the transcoding apparatus wherein the complexity estimation unit estimates the complexity of the current picture based on a product of the complexity of the decoded current picture and the ratio of the complexity of the encoded previous picture of the current picture to the complexity of the decoded previous picture of the current picture, as recited in the claim.

In the section of Tajime cited by the Examiner, col. 9, lines 24-28, Tajime merely discloses the calculation of the complexity measure X_p of a picture group in a plurality of pictures (col. 8, lines 54-55) and the complexity measure X_t in all pictures (col. 8, lines 56-57). Even assuming arguendo, that the complexity measure X_p and the complexity measure X_t correspond to the claimed complexity of the current picture and the complexity of the decoded picture, there still is nothing in Tajime which discloses or suggests a product of a complexity of a decoded current picture and a ratio of a complexity of an encoded previous picture of the current picture to a complexity of a decoded previous picture of the current picture. Therefore, claim 37 is believed to be patentable. For reasons similar to those submitted for claim 37, claims 38-45 are believed to be patentable. Applicant requests the Examiner to address the Applicant's arguments for the patentability of these claims.

Independent claims 9, 12, 17, 22, 29, 32 and 33, are believed to be patentable for at least the reasons similar to those submitted for claim 1 and for the recitations therein.

Claims 10 and 38, which depend from claim 9, claims 13 and 39, which depend from claim 12, claims 18 and 40, which depend from claim 17, claims 23, 26, 27, 36, 41 and 42, which depend from claim 22, claim 30 which depends from claim 29, claim 43, which depends

from claim 32, claim 44, which depends from claim 33, and claim 45, which depends from claim 34, are patentable for the reasons cited for their respective base claims.

Rejection of Claim 2 under § 103(a) over Tajime in view of Kim

Applicant submits that claim 2 is believed to be patentable over the combination of Tajime and Kim at least by virtue of its dependency from claim 1 and because Kim fails to make up for the deficiencies of Tajime.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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